

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2B-52,
VOLUME 2**

16 FEBRUARY 2001

Flying Operations

B-52--AIRCREW EVALUATION CRITERIA



COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. It provides guidance and procedures for administering B-52 aircrew evaluations, and establishes separate qualification, instrument, mission, and instructor evaluation grading criteria for B-52 aircrew position. This volume does not apply to the Air National Guard (ANG) units and members. MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/DOTV, for approval prior to publication IAW AFD 11-2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM to HQ USAF/XOOT, HQ ACC/DOTV, and the user MAJCOM/DRU/FOA office of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms Direct Reporting Unit (DRU) and Filed Operating Agency (FOA) as used in this paragraph refer only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360V1, *Publications Management Program*. See paragraph 1.2. for guidance on submitting comments and suggesting improvements to this volume.

This volume requires the collection or maintenance of information protected by the Privacy Act of 1974. System of records notice F011 AF XO A, Air Force Operations Resource Management System (AFORMS), applies. The authority to collect and maintain the records prescribed in this volume are Title 37 USC 301A, Incentive Pay; Public Law 92-204 (Appropriations Act for 1973), Section 715; Public Law 93-570 (Appropriations Act for 1974); Public Law 93-294 (Aviation Career Incentive Act of 1974); and Executive Order 9397. The Paperwork Reduction Act of 1974 as amended in 1996 also affects this volume. Maintain and dispose all records created as a result of processes prescribed in this instruction according to AFMAN 37-139, *Records Disposition Schedule*.

SUMMARY OF REVISIONS

This revision clarifies progress check sortie items may be used to complete the Formal Training Unit (FTU) evaluation only at flight evaluator discretion (paragraph 1.3.5.); allows units to include additional items to navigator and electronic warfare emergency procedures evaluations (paragraph 1.5.3.); increases number of questions for the weapons open book examination to a minimum of 30 and optional inclusion of these questions in the Qualification open book examination (paragraph 1.6.3.); allows FTU instructor electronic warfare (IEW) officers to take credit for instructor evaluations with student electronic warfare (EW) officers occupying the EW position (paragraph 1.7.5.); exempts FTU evaluators from flying pure stan/eval sorties (paragraph 1.8.); incorporates AFI 11-290, *Cockpit/Crew Resource Management*, evaluation criteria (paragraph 2.1.1.); clarifies basic mission capable aircrew evaluation criteria (paragraph 2.1.2.); updates mission evaluation profile guidance (paragraph 2.3.1.); aligns FTU mission evaluation profile criteria with the FTU syllabus objectives (paragraph 2.3.1.1.); clarifies air refueling rendezvous will be accomplished with a tanker aircraft (paragraph 2.3.2.); changes terrain avoidance evaluation requirement to apply to tasked units only (paragraph 2.3.3.); updates weapon delivery evaluation requirements (paragraph 2.3.4.); allows accomplishment of the AGM-142 evaluation in the AGM-142 aircrew training device (ATD), if SIMCERT 1 (paragraph 2.3.5.); reduces pilot emergency procedures (EP) patterns on recurring qualification evaluations to a minimum of two at evaluator discretion (paragraph 2.3.6.); deletes weapons preflight requirement during initial and requalification mission evaluations for checkride completion (paragraph 2.3.8.); updates EW (ATD) evaluation requirements and allows concurrent accomplishment with the EPE (paragraph 2.3.8.3.1.); deletes ATD instructor evaluation requirement (paragraph 2.4.1.); waives accomplishment of air refueling boom limit demonstration at evaluator discretion (paragraph 2.4.4.2.); changes evaluation area tables to reflect Chapter 2 updates (table 2.1., table 2.2., and table 2.3.); incorporates basic Cockpit/Crew Resource Management (CRM) task behaviors in the applicable grading areas (paragraph 3.2.2., paragraph 3.2.1.1., paragraph 3.2.1.2., paragraph 3.2.20.); requires weapon preflight evaluations on all actual weapon release sorties (paragraph 3.2.3.2.); emphasizes aircraft altitude deviation criteria for pilots and navigators (paragraph 3.2.7.1.) clarifies formation altitude and position deviation criteria for flight lead (paragraph 3.2.8.1.); changes terrain avoidance evaluation requirement to apply to tasked units only (paragraph 3.4.6., paragraph 3.4.7.); and adds definition of CRM (attachment 1).

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Chapter 1

GENERAL INFORMATION

1.1. General. Conduct all evaluations in accordance with (IAW) the provisions of AFI 11-202, Volume 2 and this volume.

1.2. Recommended Changes/Waivers:

1.2.1. Send comments and suggested improvements to this volume on an AF Form 847, **Recommendation for Change of Publication**, to the parent MAJCOM Stan/Eval. Parent MAJCOM Stan/Evals will forward approved recommendations to lead command OPR (HQ ACC/DOTV, 205 Dodd Blvd, Suite 101, Langley AFB VA 23665-2789; Email: acc.dotvsrtb@langley.af.mil). Lead Command OPR will forward approved recommendations to HQ USAF/XOOT for final approval.

1.2.2. Waivers will be requested from the parent MAJCOM/DO through Stan/Eval channels.

1.3. Procedures:

1.3.1. Flight examiners will use the evaluation criteria in this volume to conduct all flight, Aircrew Training Device (ATD), and Emergency Procedure Evaluations. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.3.2. Video recorders and Airborne Video Tape Recorders may be used to reconstruct/evaluate the mission.

1.3.3. The flight examiner should not occupy a primary crew position during evaluations to ensure the most comprehensive evaluation. However, if conditions warrant, the flight examiner may occupy a primary crew position during an evaluation.

1.3.4. Prior to the flight, the flight examiner will explain the purpose of the evaluation and how it will be conducted. The examinee will accomplish all required mission planning. Flight examiners will be furnished a copy of necessary charts, flight logs, target folders, and any additional items they deem necessary.

1.3.5. Required areas are shown in [table 2.1.](#), [table 2.2.](#), and [table 2.3.](#). When conditions such as equipment malfunction, operational requirements, or weather preclude evaluation of a particular event in-flight, it may be evaluated by an alternate method (i.e., ATD or by an verbal evaluation) in order to complete the evaluation. Document the alternate evaluation method IAW AFI 11-202V2. ATDs will only be used for areas that are certified code 1 by SIMCERT. Progress check sortie items may be used at the discretion of the evaluator to complete incomplete student Formal Training Unit (FTU) evaluations when an ATD or verbal completion is not appropriate. Specific procedures will be included in the unit supplement to AFI 11-202V2.

1.3.6. The flight examiner will thoroughly critique all aspects of the flight. During the critique, the flight examiner will review the examinee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training.

1.4. Grading Instructions. Standards and performance parameters are contained in AFI 11-202, Volume 2 and this instruction.

1.4.1. When grading criteria specify that airspeed will be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed for that area, the examinee will brief the desired airspeed.

1.4.2. The evaluator will compare examinee performance for each area accomplished during the evaluation with the standards provided in this volume and assign an appropriate grade for the area. Derive the overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW AFI 11-202, Volume 2, and this volume.

1.4.2.1. Evaluators will use the grading criteria in this volume to determine individual area grades. Judgment must be exercised when the wording of areas is subjective and when specific situations are not covered.

1.4.2.2. Evaluator judgment will be the determining factor in arriving at the overall grade.

1.4.2.3. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches:

Table 1.1. General Criteria.

Q	Altitude	+/- 150 feet
	Airspeed	+/- 10 kts
	MACH	+/- .03
	Course	+/- 5 degrees/3 NM
	TACAN Arc	+/- 2 NM
	%MAC for T/O	+/- 1.0%
	Takeoff /Stopping Distance	+/- 500 feet
	Takeoff Trim	+/- .4 units
	EPR Settings	+/- .02
	Thrust Gate Setting	+/- 5 degree
	SI Time	+/- 1 sec
	All Computed Speeds	+/- 3 kts
Q-	Altitude	+/- 200 feet
	Airspeed	+/- 15 kts
	MACH	+/- .04
	Course	+/- 10 degrees/5 NM
	TACAN Arc	+/- 3 NM
	%MAC for T/O	+/- 1.5%
	Takeoff /Stopping Distance	+/- 700 feet
	Takeoff Trim	+/- .6 units
	EPR Settings	+/- .03
	Thrust Gate Setting	+/- 10 degrees
	SI Time	+/- 1.5 sec
	All Computed Speeds	+/- 4 kts
U	Exceeded Q- Limits	

1.5. Emergency Procedures Evaluation (EPE). Pilot and copilot EPEs will be conducted in the ATD. Other crewmembers may conduct the EPE in an ATD or verbally. Only flight examiners may conduct EPEs.

1.5.1. The following items will be included in all EPEs:

1.5.1.1. Aircraft General Knowledge.

1.5.1.2. Emergency Procedures. Evaluate all BOLDPRINT items applicable to the examinee's crew position.

1.5.1.3. Crew Coordination.

1.5.2. (P/CP) The following additional items will be included on EPEs as a requisite for the instrument evaluation.

1.5.2.1. Instrument Procedures.

1.5.2.2. Unusual attitudes recoveries.

1.5.2.3. Holding procedures.

1.5.3. **(RN/N/E)** Units may include additional items in the unit supplement to AFI 11-202, Volume 2, as required.

1.5.4. When an EPE grade results in a qualified with additional training, the flight examiner will indicate whether the additional training must be accomplished before the flight evaluation or next unsupervised flight, as applicable. Additional training and reevaluations will be accomplished IAW AFI 11-202, Volume 2.

1.6. Examinations:

1.6.1. Emergency Procedures Examination (Closed Book):

1.6.1.1. General Knowledge. This exam consists of a minimum of 20 questions and includes information applicable to the individual's crew position and the unit's mission.

1.6.1.2. Bold Face. This exam must consist of one question concerning each critical action emergency procedure applicable to the individual's specialty. The answer must contain all critical action items in proper sequence. Verbatim responses are not required; however, answers must clearly state the intended course of action.

1.6.2. Qualification Examination (Open Book). This examination will be derived from all flight manuals and governing command directives. The examination will consist of at least 50 questions. Units may increase the number of questions to provide an in-depth evaluation of the examinee's knowledge.

1.6.3. Weapons Examination (Open Book) (RN-N). This exam consists of a minimum of 30 questions derived from all applicable missile or weapon directives specific to the individual's weapon qualification. The Weapons exam may be included in the Qualification examination.

1.7. Instructor Evaluations:

1.7.1. An instructor receiving an area grade of U or Q- with additional training in any instructor area will result in an overall Qual level 3 for the instructor evaluation.

1.7.2. An instructor receiving an area grade of U or Q- with additional training in any grading area must not perform instructor duties until additional training is complete. This restriction is placed in the comments and the YES block is marked in restrictions.

1.7.3. Complete all upgrade training requirements prior to this evaluation.

1.7.4. FTU instructors who fly evaluations with unqualified individuals or individuals undergoing initial qualification evaluation may take credit for a recurring instructor evaluation by performing their normal premission, in-flight, and postflight instructor duties.

1.7.5. Recurring FTU instructor evaluations may be conducted with an FTU student in the pilot, copilot, radar navigator, navigator or electronic warfare officer positions. For FTU IEWs, this can fulfill the instructor portion of the checkride only.

1.8. Stan/Eval Sortie Requirements. (N/A AFRC, FTU) Sorties developed for stan/eval crews must be pure stan/eval sorties, to the maximum extent possible. This ensures required stan/eval proficiency is maintained. Do not administer flight evaluations to other than stan/eval crew members, except to Wing CC/CV, OG/CC/CD/OGV, or SQ/CC/DO.

1.9. Records Disposition. Records will be disposed of IAW AFM 37-139, *Records Disposition Schedule*, Table 13-10.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General. All evaluations will follow the guidelines set in AFI 11-202, Volume 2. Evaluation requirements are depicted in [table 2.1.](#), [table 2.2.](#), and [table 2.3.](#)

2.1.1. Cockpit/Crew Resource Management. In accordance with AFI 11-290, *Cockpit/Crew Resource Management*, Cockpit/Crew Resource Management (CRM) skills will be evaluated during initial and recurring evaluations. Use the AF Form 4031, *CRM Skill Criteria Training/Evaluation Form*, or suitable alternate means (i.e., stan/eval trend program) to measure the effectiveness of CRM training.

NOTE: CRM encompasses all phases of flight. When awarding a less than qualified grade (i.e., Q- or U) in this area, carefully review all other grading areas for applicability.

2.1.2. Requirements. For Combat Mission Ready aircrew to complete an evaluation, all areas annotated with an "R" must be accomplished. Basic Mission Capable aircrew will be evaluated in only those areas in which they may maintain proficiency. Strive to complete all evaluation requirements on one flight for efficiency.

2.1.3. Crew Compartment Responsibility. For grading areas where either the pilot/copilot or the radar navigator/navigator is responsible, but not necessarily both (designated by P or N), determine individual responsibility by the flight manual and sound crew procedures.

2.1.4. Preplanned Mission Data. When using a staff agency derived flight plan, fuel log, etc., do not grade the individual for those portions computed by the staff. An individual using a certified computer product is responsible for the initial data input. The individual is responsible to ensure the data used in the aircraft is accurate and effective for mission accomplishment.

2.1.5. Currency of Flight Publications. Evaluate all issued technical orders, to include checklists, for currency and accuracy on all flight evaluations. Units may specify additional publications to be evaluated in the unit supplement to AFI 11-202V2.

2.2. Instrument/Qualification or Qualification Evaluation:

2.2.1. Minimum ground phase requisites are:

2.2.1.1. Closed and open book qualification examinations.

2.2.1.2. Bold Face Examination.

2.2.1.3. EPE/ATD.

2.2.1.4. Instrument Refresher Course (IRC) Training. (Pilot, Copilot, Radar Navigator, and Navigator).

2.2.1.5. Instrument Examination. (Pilot, Copilot, Radar Navigator, and Navigator).

2.2.2. Touch-and-go. Required for all touch-and-go certified pilots and copilots.

2.3. Mission Evaluation:

2.3.1. Evaluation Profiles. Design the evaluation profile using current tactics and unit taskings and will incorporate all appropriate evaluation requirements in [table 2.1.](#), [table 2.2.](#), and [table 2.3.](#) Mission evaluations will reflect real-world scenarios based on the unit's combat taskings. Provide the employment scenario IAW AFI 11-415, *Weapons and Tactics Program*, Attachment 3, and include (as a minimum): intelligence scenario, orders of battle (electronic and air), commanders intent, strike mission objectives and special instructions (SPINS). The scenario portion of the flight need not encompass the entire sortie but must include at least one weapon event. On missions when special mission instructions (SPINS) are not available or used, use command guidance from appropriate instructions.

2.3.1.1. Formal Course Evaluations . Syllabus evaluations will be flown IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives.

2.3.2. Air Refueling. The evaluation will include the following areas applicable to the examinee's crew position: air refueling communication, air refueling rendezvous (any type) with a tanker aircraft, aircraft control, descent, contact, fuel management and transfer, visual signals (may be done orally if necessary), post refueling, and breakaway. Air refueling tracks will allow at least 30 minutes of air refueling. Deviations from this requirement are permissible when tanker/bomber formation ratio or length of the published air refueling track prohibits compliance. Air refueling practice emergency separation procedures must be initiated with the receiver in contact or in the refueling envelope. Grade buddy rendezvous procedures using the formation criteria.

2.3.2.1. (P) Ten minutes of contact time (20 for initial qualification evaluations) must be completed within 30 minutes after initial pre-contact position.

2.3.3. Terrain Avoidance (TA). (If applicable) (P) Requirements include a TA operational check, at least 10 minutes terrain avoidance with an operational TA system, and at least 10 minutes terrain avoidance utilizing integrated Electro-Optical Viewing System (EVS)/visual contour procedures. Conduct TA in mountainous routes when possible.

2.3.4. Weapon Delivery Requirements:

2.3.4.1. This area encompasses all weapon delivery related procedures and checklists. Individuals assigned to units with both nuclear and conventional taskings may satisfy the weapon delivery requirement with either conventional or nuclear procedures. Make conventional mission releases IAW the mission directives/SPINS.

2.3.4.2. Evaluatees should demonstrate both stand-off or guided weapon delivery and an unguided gravity release to satisfy the in-flight weapon delivery requirement, mission and scheduling constraints permitting. However, at evaluator discretion, only one weapon delivery event is required for checkride completion. Weapon employment types are defined as: **unguided gravity** (e.g. MK-82, M117, B-61, etc.), **guided** (e.g., JDAM [GBU-31], WCMD [CBU-103], JSOW [AGM-154]) and **stand-off** (e.g., ALCM [AGM-86B], CALCM [AGM-86C], ACM [AGM-129], JASSM [AGM-158], Harpoon [AGM-84], Raptor [AGM-142]).

2.3.4.2.1. Crewmembers qualified in the AGM-142 require either a flight check with a CATM and DLP or a simulator check on each recurring evaluation.

2.3.4.2.2. AGM-86B/AGM-129 launches can be accomplished in-flight or in the Weapon System Trainer (WST).

2.3.4.3. Use EMCON procedures and techniques to the maximum extent possible, conditions permitting, and use threat avoidance/evasive action techniques.

2.3.4.4. Grade each release of a multiple unguided gravity release separately. Any type scoring is acceptable; however, Electronic Scoring Site (ESS) or range scoring is preferred.

2.3.4.5. (ACC) For TA qualified crewmembers, the unguided gravity release should be accomplished at TA altitudes.

2.3.4.5.1. (RN/N) When weather or equipment malfunctions preclude bombing at TA altitude, configure the radar scope in TA sector, except when optimum presentation requires you to come out of TA, use TA procedures, and accomplish the run at minimum safe altitude/instrument flight rules altitude. If equipment malfunctions preclude synchronous capability, alternate bombing meets the synchronous requirements of the evaluation.

2.3.5. AGM-142 Evaluation Requirements.

2.3.5.1. AGM-142 evaluations will demonstrate a launch in the aircraft or the AGM-142 ATD, if SIMCERT 1. If AGM-142 is accomplished in flight, the high angle of attack terminal phase procedures will be evaluated in the AGM-142 ATD. An individual qualified in both seats with the AGM-142 will demonstrate the launch from the RN seat.

2.3.6. EP Patterns. (P/CP) Emergency/abnormal procedures will normally be accomplished in conjunction with instrument approaches. Actions taken in response to actual or simulated emergencies that occur during the flight evaluation will be evaluated until the flight examiner declares the evaluation terminated. For six-engine approaches, the simulated loss of engines must be given during level flight with sufficient time provided to allow completion of the emergency procedures checklist prior to final approach. The use of all engines may be returned after the go-around has been completed and a safe altitude and airspeed have been attained. Copilots will be evaluated on checklist procedures and data computations required for the specific emergency/abnormal situation. On recurring qualification evaluations, a minimum of two of the following EP patterns will be accomplished at the discretion of the evaluator. On initial qualification evaluations, all EP patterns will be accomplished:

2.3.6.1. Six-engine instrument approach.

2.3.6.2. Six-engine missed approach (Simulated six-engine approach and missed approach will be accomplished from an instrument approach demonstrating technique for asymmetric thrust conditions.). On initial IP evaluations, IPs will also accomplish a six-engine land, eight-engine go. On recurring IP evaluations, IPs may accomplish the six-engine land, eight-engine go in lieu of a six-engine approach and missed approach.

2.3.6.3. Simulated Loss of Engine on Takeoff

2.3.6.4. Wing flaps up low approach and go-around.

2.3.7. Electronic Countermeasures Requirements. The examinee will accomplish at least one electronic attack (EA) run. To the maximum extent possible, the run should be scheduled against a Multiple Threat Emissions Systems (MUTES) capable site. The flight examiner will, during mission planning for mission evaluations, select a strategic, tactical, or naval MUTES scenario. For no-notice evaluations, scheduled scenario(s) may be changed by the examinee to a Sierra, Tango, or November scenario.

2.3.7.1. Flight examiners will not consider EW performance as less than qualified based solely on unreliable/substandard scores. Ground facility scores are the result of airborne/ground equipment capability and the EW procedures and techniques. If the EW procedures and techniques are com-

pletely satisfactory, unreliable/substandard score(s) become only an indication of equipment capability. Reliable/Standard scores may result although marginal or unacceptable procedures and techniques were used. Scores will not be used to assign less than qualified grades.

2.3.8. Minimum Ground Requisites:

2.3.8.1. Publication Check.

2.3.8.2. Weapons Examination (Open Book) (RN-N).

2.3.8.3. ATD Exercise. (EW) The ATD exercise is just as important as the flight evaluation, therefore the overall grade on the AF Form 8, **Certificate of Aircrew Qualification**, must include the grade given to the ATD exercise. It must be accomplished for all mission evaluations.

2.3.8.3.1. The ATD exercise will start approximately 10 minutes prior to the H-Hour Control Line/High Early Warning Line, as applicable. This exercise will evaluate all areas listed as "R" under the ATD column in [table 2.3](#). The exercise must include, but is not limited to, analyzing one system malfunction, a fighter attack (forward and/or rear hemisphere), and the penetration of high and / or low altitude threat areas according to the mission scenario. The exercise should have appropriate types and density of threats, which accurately reflect typical unit OPLANs. The evaluatee's EPE may be accomplished concurrently in this ATD. Each unit will have a minimum of two different check missions. Unit Stan/Evals will ensure that all threats and threat modes presented in check missions are represented in continuation training ATD missions. Enter on the AF Form 8 ATD Exercise date and grade (1,2, or 3) under the ground phase.

2.4. Instructor Evaluation:

2.4.1. All flying personnel selected for instructor duty must be evaluated to determine their judgment, technical knowledge, instructor ability (including error analysis of student activity), and use of grading documents as well as proficiency in their aircrew specialty. All evaluation areas will be evaluated during all instructor evaluations. Initial instructor evaluations may be taken in conjunction with qualification/instrument/mission evaluations.

2.4.2. Instructors must demonstrate proficiency by instructing a student (or qualified individual acting as a student). The evaluator may require the examinee to present verbal explanations of equipment operations, procedures, and techniques pertinent to crew specialty duties and responsibilities.

2.4.3. An evaluator who desires a critique of areas not covered in the examinee's prebrief will allow the examinee sufficient time to prepare the critique. During any phase of the flight portion of the evaluation, the evaluator may require the examinee to demonstrate (not instruct) and/or present verbal explanations of system operations and/or procedures. Evaluators must exercise sound judgment to ensure oral questions/instructions are clear, concise, pertinent to the individual's crew duties, and don't interfere with normal mission accomplishment. The evaluator may forego the additional demonstration/ instruction based on time available and other factors.

2.4.4. Instructor Pilot Requirements. Pilots receiving initial instructor evaluations must occupy the right seat for evaluation of takeoff, air refueling, initial buffet, and all traffic pattern activity. On recurring evaluations instructor pilots may occupy either seat to accomplish required items. Instructor pilots must demonstrate the ability to instruct while performing the following required in-flight activity:

2.4.4.1. Initial buffet and recovery demonstration in-flight (on recurring evaluations this event may be accomplished as part of the EPE).

2.4.4.2. Air refueling boom envelope limit demonstration. Contact time may be reduced to 5 minutes excluding the time required to demonstrate boom envelope limits. Inadvertent disconnect tolerances are not applicable during demonstration of boom envelope limits. On recurring evaluations, the boom limit demonstration is desired, but may be waived at the discretion of the evaluator.

2.4.4.3. Accomplish EP patterns as directed in paragraph 2.3.6.

2.4.5. Instructor Radar Navigator/Navigator Requirements. Instructor evaluations may be conducted in-flight or in the ATD. In the ATD thoroughly brief, conduct, and critique a profile representative of the unit's DOC.

2.4.5.1. (ACC) The instructor examinee will perform at the crew station, if the simulator option is used. Initial instructor evaluations will be conducted in the ATD.

2.4.6. Instructor Electronic Warfare Officer Requirements. Use unit-specific missions to evaluate the instructor (except FTU instructors). Enter Instructor ATD, date, and grade (1 or 3) under the ground phase on the AF Form 8. On all instructor evaluations the student will not be evaluated, except for Safety of Flight.

2.4.6.1. (ACC) All instructor evaluations will be accomplished in the ATD except as outlined in paragraph 1.7.5.

2.4.6.2. (AFRC) Initial and requalification evaluations will be accomplished in the ATD. Periodic instructor evaluations can be accomplished in-flight or in the ATD.

2.4.7. Minimum Ground Requisites:

2.4.7.1. ATD. As required in paragraph 2.4.5. and 2.4.6. above. (RN/N/E)

2.5. Reporting Deviations/Discrepancies by Unlike Specialty. Evaluators must report deviations/discrepancies within their aircraft from established procedures/directives in any area, regardless of the individual's crew specialty, to the OGV for evaluation and necessary action. If the deviation/discrepancy is found to warrant overall Qualification Level 3 AF Form 8 documentation, annotate SPOT in the Flight Phase block. The Chief of OGV will sign as the flight examiner. If an evaluator is flying as an instructor or crewmember and deviations are observed, report deviations to appropriate individual (No AF Form 8 required).

2.5.1. For formation purposes, evaluators of like or unlike specialty in other aircraft within the formation who observe deviations/discrepancies affecting the overall safe conduct of the formation will report such deviation/discrepancy to the OGV for evaluation and necessary action. If AF Form 8 documentation is warranted, use the procedures in paragraph 2.5. above. If an evaluator is flying as an instructor or crewmember and deviations are observed, report deviations to appropriate individual (No AF Form 8 required).

2.6. Dual Seat Qualification. Dual seat qualified crewmembers will get their recurring evaluations in the primary crew position (i.e., Aircraft Commander or Radar Navigator). Additionally, dual seat qualified crewmembers must demonstrate the items required to log the right seat requirements of an AFI

11-2B52 Volume 1, *B-52 -- Aircrew Training*, Opposite Seat Exercise. (P) For the purpose of this evaluation, a touch-and-go will suffice for the takeoff and landing requirement of the exercise.

2.7. Crew Compartment Spot Evaluations. When an individual in a crew compartment is receiving an evaluation, the other compartment individual may receive a Spot evaluation. Only annotate SPOT when the evaluation does not update the individual's expiration date. Individuals must declare their desire to update the expiration date on mission planning day. Annotate the type of evaluation given (i.e., QUAL/MSN not SPOT) in the Flight Phase.

Table 2.1. Pilot Evaluations.

AREA	NOTES	AREA TITLE	INST/QUAL	MISSION
GENERAL				
1		MISSION PLANNING	R	R
2		BRIEFING	R	R
3		PRE-TAKEOFF	R	R
4	1	TAKEOFF	R	
5	1, 2	DEPARTURE	R	
6	1	LEVEL-OFF	R	
7		CRUISE/NAVIGATION	R	
8		FORMATION		
9		IN-FLIGHT CHECKS	R	R
10		EQUIPMENT OPERATION	R	R
11		COMMUNICATION/IFF/ SIF PROCEDURES	R	R
12		CREW COORDINATION/CREW RESOURCE MANAGEMENT (CRM)	R	R
13	1, 8	AIR REFUELING		R
14	2	DESCENT	R	
15		GO-AROUND	R	
16	1, 6, 7	EMERGENCY TRAFFIC PATTERNS	R	
17	1	VFR PATTERN/APPROACH	R	
18		LANDING	R	
19		AFTER-LANDING	R	
20		DEBRIEFING/CRITIQUE	R	R
21		KNOWLEDGE	R	R
22	*	AIRMANSHIP	R	R
23	*	SAFETY	R	R
24	*	AIRCREW DISCIPLINE	R	R
25	4	INSTRUCTOR PERFORMANCE	R	R
26-30		NOT USED		
INSTRUMENT				
31	5	HOLDING	R	
32	1, 2	INSTRUMENT PENETRATION/ENROUTE DESCENT	R	
33	3	PRECISION APPROACH	R	
34		NON-PRECISION	R	
35		MISSED APPROACH/CLIMB-OUT	R	
36		CIRCLING/SIDE-STEP APPROACH		
37-40		NOT USED		
TACTICAL EMPLOYMENT				
41		TACTICAL PLAN		R
42		TACTICAL EMPLOYMENT		R
43		GCI/AWACS/ COMPOSITE FORCE INTERFACE		
44		RADIO TRANSMISSION/ INTERPHONE-USAGE AND DISCIPLINE		R
45		INGRESS		R
46 (if applicable)		LOW ALTITUDE NAVIGATION		R
47 (if applicable)		TA-INTEGRATED EVS/VISUAL PROCEDURES		R
48		WEAPONS EMPLOYMENT		R
49		RANGE/ESS PROCEDURES		R
50		EGRESS		R
51		TRAINING RULES/ROE		R
52-60		NOT USED		

*Indicates a critical area.

NOTES:

1. Copilots do not require a grade unless they are actually flying the aircraft. Grade copilots in checklist procedures and fuel panel operations.

2. Accomplish either a Departure or an Instrument Penetration/Enroute Descent. Published letdown and departures for low altitude routes may also be used.
3. Both a PAR and an ILS must be evaluated if equipment and facilities are available. However, if facilities or equipment are not available, the flight evaluation may be completed as long as one precision approach is flown.
4. On Instructor evaluations, all "R" items are required.
5. Holding may be accomplished in the ATD.
6. On recurring qualification evaluations, a minimum of two EP patterns outlined in paragraph 2.3.6. will be accomplished at the discretion of the evaluator. On initial qualification evaluations, all EP patterns will be accomplished.
7. On initial IP evaluations, IPs will also accomplish a six-engine land, eight-engine go. On recurring IP evaluations, IPs may accomplish the six-engine land, eight-engine go in lieu of a six-engine approach and missed approach.
8. On recurring evaluations, the boom limit demonstration is desired, but may be waived at the discretion of the evaluator.

Table 2.2. Radar Navigator/Navigator Evaluations.

AREA	NOTES	AREA TITLE	QUAL	MISSION
GENERAL				
1		MISSION PLANNING	R	R
2		BRIEFING	R	R
3		PRE-TAKEOFF	R	R
4		TAKEOFF	R	
5		DEPARTURE	R	
6		LEVEL-OFF		
7		CRUISE/NAVIGATION	R	
8		FORMATION		
9		IN-FLIGHT CHECKS	R	R
10		EQUIPMENT OPERATION	R	R
11		COMMUNICATION/IFF/ SIF PROCEDURES	R	R
12		CREW COORDINATION/CREW RESOURCE MANAGEMENT (CRM)	R	R
13		AIR REFUELING		R
14		DESCENT	R	
15		GO-AROUND		
16		EMERGENCY TRAFFIC PATTERNS		
17		VFR PATTERN/APPROACH		
18		LANDING		
19		AFTER-LANDING	R	
20		DEBRIEFING/CRITIQUE	R	R
21		KNOWLEDGE	R	R
22	*	AIRMANSHIP	R	R
23	*	SAFETY	R	R
24	*	AIRCREW DISCIPLINE	R	R
25		INSTRUCTOR PERFORMANCE	R	R
26-30		NOT USED		
INSTRUMENT				
31-40		NOT USED		
TACTICAL EMPLOYMENT				
41		TACTICAL PLAN		R
42		TACTICAL EMPLOYMENT		R
43		GCI/AWACS/ COMPOSITE FORCE INTERFACE		
44		RADIO TRANSMISSION/ INTERPHONE- USAGE AND DISCIPLINE		R
45		INGRESS		R
46 (if applicable)		LOW ALTITUDE NAVIGATION		R
47 (if applicable)		TA-INTEGRATED EVS/VISUAL PROCEDURES		R
48		WEAPONS EMPLOYMENT		R
49		RANGE/ESS PROCEDURES		R
50		EGRESS		R
51		TRAINING RULES/ROE		R
52-60		NOT USED		

* Indicates a critical area

Table 2.3. Electronic Warfare Evaluations.

AREA	AREA TITLE	QUAL	MISSION	ATD
GENERAL				
1	MISSION PLANNING	R	R	
2	BRIEFING	R	R	
3	PRE-TAKEOFF	R	R	
4	TAKEOFF			
5	DEPARTURE	R		
6	LEVEL-OFF			
7	CRUISE/NAVIGATION	R		
8	FORMATION			
9	IN-FLIGHT CHECKS	R	R	
10	EQUIPMENT OPERATION	R	R	R
11	COMM/IFF/SIF	R	R	
12	CREW COORDINATION/CREW RESOURCE MANAGEMENT (CRM)	R	R	
13	AIR REFUELING			
14	DESCENT	R		
15	GO-AROUND			
16	EMERGENCY TRAFFIC PATTERNS			
17	VFR PATTERN/APPROACH			
18	LANDING			
19	AFTER-LANDING	R		
20	DEBRIEFING/CRITIQUE	R	R	
21	KNOWLEDGE	R	R	
22	* AIRMANSHIP	R	R	
23	* SAFETY	R	R	
24	* AIRCREW DISCIPLINE	R	R	
25	INSTRUCTOR PERFORMANCE	R	R	
26-30	NOT USED	R	R	
INSTRUMENT				
31-40	NOT USED			
TACTICAL EMPLOYMENT				
41	TACTICAL PLAN		R	
42	TACTICAL EMPLOYMENT		R	R
43	GCI/AWACS/COMPOSITE FORCE INTERFACE			
44	RADIO TRANSMISSION/ INTERPHONE-USAGE AND DISCIPLINE		R	
45	INGRESS		R	R
46	LOW ALTITUDE NAVIGATION			
47	TA-INTEGRATED EVS/VISUAL PROCEDURES			
48	WEAPONS EMPLOYMENT			
49	RANGE/ESS PROCEDURES		R	
50	EGRESS		R	R
51	TRAINING RULES/ROE		R	
52	THREAT IDENTIFICATION		R	R
53	PENETRATION PROCEDURES		R	R
54	EXPENDABLE PROCEDURES		R	R
55	THREAT COUNTERMEASURES		R	R
56	ACQUISITION/ COMMUNICATION COUNTERMEASURES		R	R
57	WITHDRAWAL PROCEDURES		R	R

* Indicates a critical area.

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards:

3.1.1. The grading criteria in this chapter are divided into three sections: General, Instrument, and Tactical Employment. Use all sections for criteria applicable to the events performed on the evaluation.

3.1.2. Areas marked (P) are for pilots and copilots only, areas marked (N) are for radar navigators and navigators only, and areas marked (E) are for electronic warfare officers only. All other areas are common to all aircrews.

3.1.3. Where major areas are divided into subareas, only one grade will be assigned to the major areas. Discrepancies on the back of the AF Form 8 will be annotated by subarea.

3.2. General:

3.2.1. Area 1--Mission Planning:

3.2.1.1. Mission Preparation:

3.2.1.1.1. Q. Crew member developed a sound plan to accomplish the mission. Accurately and efficiently accomplished mission preparation tasks. Checked all factors applicable to flight in accordance with applicable directives. Aware of alternatives available, if flight cannot be completed as planned.

3.2.1.1.2. Q-. Same as above, except minor deviations, omissions, and/or errors that did not detract from mission effectiveness. Knowledge of performance capabilities or approved operating procedures/rules was marginal in some areas.

3.2.1.1.3. U. Major deviations, omissions, and/or errors that would preclude safe/effective mission accomplishment. Displayed faulty knowledge of operating data or procedures. Did not sign off FCIF prior to flight.

3.2.1.2. Publications:

3.2.1.2.1. Q. Assigned flight manual publications were current and usable for any of the unit's combat taskings. Contained only minor deviations, omissions, and/or errors.

3.2.1.2.2. Q-. Assigned flight manual publications contained deviations, omissions, and/or errors; however, contained everything necessary to effectively accomplish the mission and did not compromise safety of flight.

3.2.1.2.3. U. Not up to "Q-" standards. Contained major deviations, omissions, and/or errors.

3.2.2. Area 2--Briefing:

3.2.2.1. Organization:

3.2.2.1.1. Q. Well-organized, clear, concise briefing, presented in a logical sequence. Concluded briefing in time to allow for formation briefing (if applicable).

3.2.2.1.2. Q-. Events out of sequence, hard to follow, some redundancy.

3.2.2.1.3. U. Disorganized. Illogical sequence during presentation caused confusion. Did not allow time for formation briefing (if applicable).

3.2.2.2. Presentation:

3.2.2.2.1. Q. Presented briefing in a professional manner, well organized and in a logical sequence. Provided specific crew member duties necessary for successful mission accomplishment. Flight/crew members clearly understood mission overview, goals, and requirements.

3.2.2.2.2. Q-. Dwelled on non-essential mission items. Minor omissions of required crew member duties affected mission accomplishment.

3.2.2.2.3. U. Presentation created doubts or confusion. Major omissions of required crew member duties severely degraded mission accomplishment.

3.2.2.3. Mission Objectives:

3.2.2.3.1. Q. Established clear, measurable objectives for the mission. Presented all training events and effectively addressed methods for accomplishing the mission, including ways to minimize potential mission contingencies/problem areas.

3.2.2.3.2. Q-. Objectives undefined and/or poorly quantified. Omitted minor training events. Limited discussion of techniques and potential mission contingencies/problem areas.

3.2.2.3.3. U. Did not establish objectives for the mission. Omitted major training events or did not discuss techniques and potential mission contingencies/problem areas.

3.2.2.4. Flight/Crew Member Consideration:

3.2.2.4.1. Q. Considered the abilities of all flight/crew members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.2.2.4.2. Q-. Did not consider all flight/crew members' abilities. Did not identify possible problem areas.

3.2.2.4.3. U. Ignored flight/crew members' abilities and past problem areas.

3.2.3. Area 3--Pre-Takeoff (Includes all activity up to crossing the hold line):

3.2.3.1. Procedures:

3.2.3.1.1. Q. Established and adhered to station, start engine, taxi times to assure thorough preflight, check of personal equipment, crew briefing, etc. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives. Unplanned deviations were out of the evaluatee's control.

3.2.3.1.2. Q-. Minor deviations, omissions, and/or errors occurred which did not detract from mission effectiveness or performance and/or knowledge was the minimum acceptable and indicated a definite need for assigned study and/or additional training.

3.2.3.1.3. U. Omitted major item(s) of the appropriate checklist. Major deviations in procedure, which would preclude safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Crew errors directly contributed to a late takeoff, which degraded the mission or made it non-effective.

3.2.3.2. (RN/N) Weapons: Weapon preflights will be evaluated on all actual weapon release sorties.

3.2.3.2.1. Q. Accomplished all checklist items.

3.2.3.2.2. Q-. Accomplished checklist items with only minor deviations, omissions, and/or errors.

3.2.3.2.3. U. Not up to "Q-" standards.

NOTE: The flight examiner may also grade the examinee unqualified in AIRMANSHIP if the examinee would not be able to deliver an effective weapon due to improper weapon preflight.

3.2.4. Area 4--(P/N) Takeoff (Crossing hold line through flap retraction):

3.2.4.1. Q. Accomplished prescribed procedures and checklists in accordance with the flight manual and governing directives.

3.2.4.1.1. (P) Smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures. Airspeeds were within tech order tolerances.

3.2.4.1.2. (N) Called expiration of S1 time within 1 second.

3.2.4.2. Q-. Minor flight manual procedural or technique deviations.

3.2.4.2.1. (P) Some under or over control at liftoff.

3.2.4.2.2. (N) Called expiration of S1 time within 2 seconds.

3.2.4.3. U:

3.2.4.3.1. (P) Lift-off potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

3.2.4.3.2. (N) Not up to "Q-" standards.

3.2.5. Area 5--Departure (Includes all activity from flap retraction up to and including initial level-off):

3.2.5.1. Q. Performed departure as published/directed and complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.5.2. Q-. Minor deviations in airspeed and navigation occurred during completion of departure. Minor omissions, deviations, and/or errors in procedures detracted from overall mission efficiency.

3.2.5.3. U. Failed to comply with published/directed departure instructions. Major omissions, deviations, and/or errors in procedures.

3.2.6. Area 6--(P) Level-Off:

3.2.6.1. Q. Leveled off smoothly. Promptly established proper cruise airspeed.

3.2.6.2. Q-. Level-off was erratic. Slow in establishing proper cruise airspeed.

3.2.6.3. U. Level-off was extremely erratic. Exceeded Q- limits. Excessive delay or failed to establish proper cruise airspeed. Failed to reset altimeter, as required.

3.2.7. Area 7--Cruise/Navigation (Includes all high altitude navigation):

3.2.7.1. Q. Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace (i.e., MOA, restricted area, etc.). Altitude deviations did not exceed +/-150 feet from published or briefed altitude. Made all control times within published or briefed tolerances. At no time allowed the aircraft to deviate more than ten nautical miles from planned course.

3.2.7.1.1. (P) Fix-to-Fix +/- 2NM.

3.2.7.1.2. (N) Mission reconstruction was possible. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation.

3.2.7.1.3. (E) Procedures were accomplished according to the flight manual and governing directives with only minor deviations, omissions, or errors.

3.2.7.2. Q-. Minor errors in procedures or use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Performance demonstrated a lack of knowledge or ability that could have affected mission accomplishment.

3.2.7.2.1. (P) Fix-to-Fix +/-4NM.

3.2.7.2.2. (N) Advised the pilots of altitude deviations prior to exceeding +/-200 feet of deviation.

3.2.7.2.3. (E) Procedures were accomplished with deviations, omissions, or errors demonstrating the minimum acceptable knowledge or performance.

3.2.7.3. U. Major errors in procedures or use of navigation equipment. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded parameters for Q-.

3.2.7.3.1. (E) Procedures were accomplished with deviations, omissions, or errors demonstrating unacceptable knowledge or performance.

3.2.8. Area 8--Formation (Includes formation join-up, enroute procedures, and position changes, if accomplished):**3.2.8.1. Flight Lead:**

3.2.8.1.1. Q. Established appropriate formations. Positive control of flight/element during mission. Planned ahead and made timely decisions. Complied with procedures.

3.2.8.1.1.1. (P) Made smooth and immediate position corrections.

3.2.8.1.1.2. (N) Advised the pilot of the position of the other aircraft in the formation in a timely manner. Advised the pilot of altitude and/or position errors within 150 feet and one-half mile.

3.2.8.1.2. Q-. Limited flight management. Not unsafe, but formation was difficult for wingman to maintain position. Did not always plan ahead and/or was hesitant in making decisions. Delayed mission accomplishment or degraded training. Minor deviations in procedure.

3.2.8.1.3. U. Did not establish appropriate formations. Little consideration for wingman. Major deviations in procedures. Indecisive. Placed wingman in unsafe position or circumstance. Did not accomplish the mission or failed to correct in-flight discrepancies.

3.2.8.1.3.1. (P) Failed to ensure wingman maintained proper position.

3.2.8.2. Wingman:

3.2.8.2.1. Q. Was able to maintain position with only momentary deviations. Maintained safe separation and complied with procedures. Smooth, timely join-up.

3.2.8.2.1.1. (P) Made smooth and immediate position corrections.

3.2.8.2.1.2. (N) Advised the pilot of the position of the other aircraft in the formation in a timely manner. Advised the pilot of altitude and/or position errors within 150 feet and one-half mile.

3.2.8.2.2. Q-. Position varied considerably. Some procedure deviations.

3.2.8.2.2.1. (P) Over-controlled. Slow to join-up.

3.2.8.2.2.2. (N) Advised the pilot of altitude and/or position errors within 200 feet and three-quarters of a mile.

3.2.8.2.3. U. Unable to maintain a formation position. Unsafe join-up or procedures. Not up to "Q-" standards.

3.2.8.2.3.1. (P) Abrupt position corrections. Did not maintain safe separation.

3.2.9. Area 9--In-flight Checks:

3.2.9.1. Q. Performed all in-flight checks as required.

3.2.9.2. Q-. Minor deviations, errors or omissions during checks. Performance and/or knowledge was the minimum acceptable and indicated a definite need for assigned study and/or additional training.

3.2.9.3. U. Did not perform in-flight checks or monitor systems to the degree that an emergency condition would have developed if allowed to continue uncorrected.

3.2.10. Area 10--Equipment Operation:

3.2.10.1. Q. Operated equipment according to procedures and checklists contained in the flight manuals and governing directives. Accurately and efficiently analyzed equipment malfunctions with consistent reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.

3.2.10.2. Q-. Operated equipment with minor deviations, omissions, and/or errors from procedures required by the flight manual or governing directives. Equipment malfunctions were consistently ignored, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. Deviations, omissions, and/or errors in malfunction analysis, prescribed procedures, or faulty techniques caused a degradation of equipment performance. The level of performance or knowledge consistently resulted in marginal reliability. Did not damage equipment.

3.2.10.3. U. Not up to "Q-" standards. Equipment damage would have resulted due to circumstances within operator's control. Could not recognize a major equipment malfunction. Could not obtain acceptable results due to poor operational techniques or procedures.

3.2.11. Area 11--Communication/IFF/SIF Procedures:

3.2.11.1. Q. Crewmember used concise and standard terminology and asked for/provided clarification when necessary. Complied with and acknowledged applicable communications. Complete knowledge of and compliance with correct Communication/IFF/SIF procedures.

3.2.11.2. Q-. Poor communications skills impacted successful mission accomplishment. Occasional deviations from correct procedures that required retransmissions or resetting codes. Slow in initiating required actions and/or acknowledging applicable communications. Transmissions contained extraneous matter, were not in proper sequence, or nonstandard terminology used. Minor IFF/SIF procedure deviations noted.

3.2.11.3. U. Incorrect IFF/SIF procedures or poor communications performance precluded mission accomplishment or jeopardized safety. Failed to submit a required report.

3.2.12. Area 12--Crew Coordination/Cockpit/Crew Resource Management:

3.2.12.1. Q. Effectively coordinated with other crewmembers during all phases of the mission. Crewmember identified, planned, and executed alternate mission activity in response to in-flight contingencies in a timely manner. Actively sought other crewmember opinions and ideas. Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources, ensuring smooth mission execution.

3.2.12.2. Q-. Crew coordination was the minimum acceptable. Coordination was lacking with other crewmembers to the extent minor deviations or omissions caused delays, confusion, degraded the successful delivery of weapons, and/or crew situational awareness. Crewmember was slow to identify, plan, or execute alternate mission activities in response to contingencies. Poor task prioritization and inefficient use of available resources resulted in less than optimum mission execution. Slow to recognize and request assistance when task-saturated.

3.2.12.3. U. Severe breakdown in coordination with other crewmembers precluded mission accomplishment and/or jeopardized safety. Crew coordination was lacking to the extent the mission accomplishment was severely degraded. Created confusion or delays that could have endangered the aircraft or prevented reliable weapon delivery. Failed to prioritize multiple tasks and did not use available resources at his/her disposal to manage workload. Not up to Q- standards.

3.2.13. Area 13--Air Refueling:

3.2.13.1. Air Refueling Rendezvous:

3.2.13.1.1. Q. Rendezvous accomplished using proper procedures. Effective use of radio communications.

3.2.13.1.1.1. (N) Positively identified the tanker beacon, when applicable, and did not delay final closure.

3.2.13.1.2. Q-. Rendezvous delayed by improper techniques, procedures, or radio communications.

3.2.13.1.3. U. Spent excessive time in trail, excessive rendezvous delay or safety of flight jeopardized. Made an actual or attempted rendezvous with the wrong aircraft, or the individual was unable to find the correct tanker in multi-aircraft refueling. Not up to "Q-" standards.

3.2.13.2. (P) Air Refueling Procedures:

3.2.13.2.1. Q. Used proper procedures. Expeditious hookup. Aircraft control was smooth and positive during tanker rendezvous and refueling. Refueled with no more than three (two for recurring checks) pilot-induced disconnects.

3.2.13.2.2. Q-. Used proper procedures. Slow to hookup. Rough aircraft control during rendezvous and refueling. Refueling with no more than four (three for recurring checks) pilot-induced disconnects.

3.2.13.2.3. U. Used unacceptable procedures. Excessive time to hookup delayed mission accomplishment. Unable to maintain contact position. Caused more than four (three for recurring checks) pilot-induced disconnects. Unable to safely accomplish air refueling.

3.2.14. Area 14--Descent (From start descent for enroute descent or departure from the IAF for published penetrations through the final approach fix [P] or landing [N]):

3.2.14.1. Q. Performed descent as directed, complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.14.1.1. (N) Informed pilots of airspeed deviations of -5/+10 knots, altitude deviations prior to exceeding +/-150 feet of deviation, and assigned heading +/- 5 degrees.

3.2.14.2. Q-. Performed descent as directed with minor deviations. Accomplished procedures and checklists required by the flight manual and governing directives with minor omissions, deviations, or errors.

3.2.14.2.1. (N) Informed pilots of airspeed deviations of -10/+15 knots, altitude deviations prior to exceeding +/-200 feet of deviation, and assigned heading +/-10 degrees.

3.2.14.3. U. Performed descent with major deviations. Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge/performance of the flight manual or governing directives.

3.2.14.3.1. (N) Allowed the pilot to descend unannounced below MDA/DH in excess of 50 feet. Not up to "Q-" standards.

3.2.15. Area 15--(P) Go-Around:

3.2.15.1. Q. Initiated and performed go-around promptly in accordance with manual and operational procedures and directives. Airspeed tolerances are:

3.2.15.1.1. Flaps Down. +/-10 KIAS

3.2.15.1.2. No-Flap. +10/-0 KIAS

3.2.15.2. Q-. Slow to initiate go-around or procedural steps. Airspeed tolerances are:

3.2.15.2.1. Flaps Down. +/-15 KIAS

3.2.15.2.2. No-Flap. +15/-5 KIAS

3.2.15.3. U. Did not self-initiate go-around when appropriate or directed. Techniques unsafe or applied incorrect procedures. Erratic aircraft control. Large deviations in runway alignment.

3.2.16. Area 16--(P) Emergency Traffic Patterns:

3.2.16.1. Q. Performed emergency procedures IAW applicable directives. Able to prioritize actions to safely recover the aircraft. Maintained aircraft control within appropriate standards. Airspeed tolerances are:

3.2.16.1.1. Flaps Down. +/-10 KIAS

3.2.16.1.2. No Flap Airspeed. +10/-0 KIAS

3.2.16.2. Q-. Performed emergency procedures with minor deviations, omissions, and/or errors from applicable directives, did not jeopardize the safe recovery of the aircraft. Airspeed tolerances are:

3.2.16.2.1. Flaps Down. +/-15 KIAS

3.2.16.2.2. No Flap Airspeed. +15/-5 KIAS

3.2.16.3. U. Performed emergency procedures with major deviations, omissions, and/or errors. Unable to safely recover the aircraft.

3.2.17. Area 17--(P) VFR Pattern/Approach:

3.2.17.1. Q. Performed patterns/approaches IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment. Maintained proper or briefed airspeed. Airspeed +10/-5 knots.

3.2.17.2. Q-. Performed patterns/approaches with minor deviations to procedures outlined in the flight manual, operational procedures and local directives. Aircraft control was not consistently smooth, but safe. Variations in runway alignment. Slow to correct to proper or briefed airspeed. Airspeed +15/-10 knots.

3.2.17.3. U. Approaches not performed IAW procedures outlined in the flight manual, operations procedures, and local directives. Erratic aircraft control. Large deviations in runway alignment.

3.2.18. Area 18--(P) Landing:

3.2.18.1. Q. Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment.

3.2.18.2. Q-. Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough however, runway alignment was accomplished.

3.2.18.3. U. Landing not performed IAW procedures outlined in the flight manual, operational procedures and local directives. Not up to "Q-" standards.

3.2.19. Area 19--After Landing (Includes activity from final landing to crew debrief/critique):

3.2.19.1. Q. Appropriate after-landing checks and aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. Completed all required forms accurately.

3.2.19.2. Q- Same as qualified except some deviations or omissions noted in performance of after-landing check and/or aircraft taxi procedures. Safety was not jeopardized. Required forms completed with minor deviations, omissions, and/or errors.

3.2.19.3. U. Major deviations, omissions, and/or errors were made in performance of after-landing check or aircraft taxi procedures, which could have jeopardized safety. Data recorded inaccurately or omitted. Not up to "Q-" standards.

3.2.20. Area 20--Debriefing/Critique:

3.2.20.1. Q. Thoroughly debriefed the key points of the mission. Compared mission results with initial objectives established. Debriefed deviations and offered corrections. Provided specific, objective, feedback to other crewmembers. Feedback was provided on both the individual and crew. Provided specific errors and ways to correct them.

3.2.20.2. Q- Limited debriefing. Did not thoroughly discuss performance in relationship to mission objectives. Provided little feedback on individual and team performance when it was necessary. Did not debrief deviations.

3.2.20.3. U. Did not debrief mission deviations or offer corrective guidance.

3.2.21. Area 21--Knowledge:

3.2.21.1. Emergency Procedures:

3.2.21.1.1. Q. Correct, immediate response to Bold Face and non-Bold Face emergency situations. Effectively used checklist/flight manual.

3.2.21.1.2. Q- Response to certain areas of non-Bold Face emergencies or follow-on steps to Bold Face procedures was slow/confused. Used the checklist/flight manual when appropriate, but slow to locate required data.

3.2.21.1.3. U. Incorrect response to Bold Face emergency situations. Unable to analyze problems or take corrective action. Did not use checklist/flight manual, or lacks acceptable familiarity with its arrangement or contents.

3.2.21.2. Flight Rules/Procedures:

3.2.21.2.1. Q. Thorough knowledge of flight rules and procedures. Thorough knowledge of local area procedures.

3.2.21.2.2. Q- Deficiencies in depth of knowledge. Limited knowledge of local area procedures.

3.2.21.2.3. U. Inadequate knowledge of flight rules and procedures. Inadequate knowledge of local area procedures.

3.2.22. Area 22--Airmanship (Critical):

3.2.22.1. Q. Executed the assigned mission in a timely, efficient manner. Demonstrated a keen sense of **situational awareness**. Conducted the flight with a sense of understanding and comprehension.

3.2.22.2. U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgement or situational awareness to the extent that safety could have been

compromised. Resources were not always effectively used to the extent that specific mission objectives were not achieved.

3.2.23. Area 23--Safety (Critical):

3.2.23.1. Q. Aware of and complied with all safety factors required for safe aircraft operations and conduct of the mission.

3.2.23.2. U. Was not aware of or did not comply with all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish Boldface procedures. Operated the aircraft or equipment in a dangerous manner.

3.2.23.2.1. (P) Did not adequately clear.

3.2.24. Area 24--Aircrew Discipline (Critical):

3.2.24.1. Q. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.2.24.2. U. Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.

3.2.24.2.1. (E) Jammed restricted frequencies (momentary or unintentional spillover jamming of restricted frequency will be condoned if the EWO took reasonable precautions to avoid it and immediately removed jamming).

3.2.25. Area 25--Instructor Performance:

3.2.25.1. Briefing/Debriefing:

3.2.25.1.1. Q. Presented a comprehensive, instructional briefing/debriefing, which encompassed all mission events. Made use of available training aids. Analyzed all events/maneuvers. Clearly defined objectives.

3.2.25.1.2. Q-. Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.

3.2.25.1.3. U. Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Did not use available training aids/reference material effectively. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives.

3.2.25.2. Demonstration of Maneuvers/Equipment Operation:

3.2.25.2.1. Q. Performed required maneuvers or procedures within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated sound instructor proficiency.

3.2.25.2.2. Q-. Performed required maneuvers or procedures with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.2.25.2.3. U. Was unable to properly perform required maneuvers or procedures. Made major procedural errors. Did not provide in-flight commentary. Demonstrated below-average instructor proficiency.

3.2.25.3. Instructor Knowledge:

3.2.25.3.1. Q. Demonstrated in-depth knowledge of procedures, requirements, aircraft systems and performance characteristics, mission, and tactics beyond that expected of non-instructors.

3.2.25.3.2. Q-. Deficiencies noted in the depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission or tactics.

3.2.25.3.3. U. Unfamiliar with procedures, requirements, aircraft systems/performance characteristics, mission, or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

3.2.25.4. Training Forms Preparation:

3.2.25.4.1. Q. Completed appropriate training records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

3.2.25.4.2. Q-. Minor errors or omissions in training/evaluation records. Comments were incomplete or slightly unclear.

3.2.25.4.3. U. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.2.25.5. Ability to Instruct:

3.2.25.5.1. Q. Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction/evaluation was accurate, effective, and timely. Was completely aware of aircraft/mission situation at all times.

3.2.25.5.2. Q-. Problems in communication or analysis degraded effectiveness of instruction/evaluation.

3.2.25.5.3. U. Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not remain aware of aircraft/mission situation at all times.

3.3. Instrument:

3.3.1. Area 31--(P) Holding:

3.3.1.1. Q. Entry and holding procedures IAW applicable directives. Holding pattern limit exceeded by not more than:

3.3.1.1.1. VOR +/- 15 seconds

3.3.1.1.2. TACAN +/- 2 NM

3.3.1.2. Q-. Holding pattern limit exceeded by not more than:

3.3.1.2.1. VOR +/- 20 seconds

3.3.1.2.2. TACAN +/- 3 NM

3.3.1.3. U. Exceeded criteria for Q- or holding pattern limits.

3.3.2. Area 32--(P) Instrument Penetration/Enroute Descent:

3.3.2.1. Q. Performed the penetration/enroute descent and approach as published/directed and IAW applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

3.3.2.2. Q-. Performed the penetration/enroute descent and approach with minor deviations. Complied with all restrictions. Slow to make corrections.

3.3.2.3. U. Performed the penetration/enroute descent and approach with major deviations. Erratic corrections.

3.3.3. Area 33--(P) Non-Precision Approach:

3.3.3.1. Q. Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at MDA at or before VDP/MAP. Position would have permitted a safe landing.

3.3.3.1.1. Airspeed +10/-5 kts

3.3.3.1.2. Heading ± 5 degrees (ASR)

3.3.3.1.3. Course ± 5 degrees at MAP

3.3.3.1.4. Localizer less than one dot deflection

3.3.3.1.5. Minimum Descent Altitude +100/-0 feet

3.3.3.1.6. Timing +/-10 secs

3.3.3.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Position would have permitted a safe landing.

3.3.3.2.1. Airspeed +15/-10 kts

3.3.3.2.2. Heading ± 10 degrees (ASR)

3.3.3.2.3. Course ± 10 degrees at MAP

3.3.3.2.4. Localizer within two dot deflection

3.3.3.2.5. Minimum Descent Altitude +150/-50 feet

3.3.3.2.6. Timing +/- 20 secs

3.3.3.3. U. Did not comply with published and directed procedures or restrictions. Exceeded Q-limits. Maintained steady-state flight below the MDA. Could not land safely from the approach.

NOTE: The -50 foot tolerance applies only to momentary deviations.

3.3.4. Area 34--(P) Precision Approach:

3.3.4.1. Q. Performed procedures as directed and IAW applicable flight manual. Smooth and timely response to controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.

3.3.4.1.1. Airspeed +10/-5 kts

3.3.4.1.2. Heading within 5 degrees of controller's instructions (PAR)

3.3.4.1.3. Glide Slope/Azimuth within one dot (ILS)

3.3.4.2. Q-. Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Improper glide path control. Initiated appropriate action at Decision Height +/- 50 feet.

3.3.4.2.1. Airspeed +15/-10 kts

3.3.4.2.2. Heading within 10 degrees of controller's instructions (PAR)

3.3.4.2.3. Glide Slope within one dot low/two dots high (ILS)

3.3.4.2.4. Azimuth within two dots (ILS)

3.3.4.3. U. Performed procedures with major deviations. Erratic corrections. Did not respond to controller's instructions. Erratic glide path control. Did not comply with decision height and/or position would not have permitted a safe landing.

3.3.5. Area 35--(P) Missed Approach/Climb-Out:

3.3.5.1. Q. Executed missed-approach/climb-out as published/directed. Completed all procedures IAW applicable flight manual.

3.3.5.2. Q-. Executed missed approach/climb-out with minor deviations. Slow to comply with published procedures, controller's instructions, or flight manual procedures.

3.3.5.3. U. Executed missed-approach/climb-out with major deviations, or did not comply with applicable directives.

3.3.6. Area 36--(P) Circling/Side-Step Approach:

3.3.6.1. Q. Performed circling/side-step approach in accordance with procedures outlined in the flight manual and directives. Aircraft control was positive and smooth. Proper runway alignment. Airspeed: +10/-5 KIAS.

3.3.6.2. Q-. Performed circling/side-step approach with minor deviations to procedures outlined in the flight manual and directives. Aircraft control was not consistently smooth, but safe. Variations in runway alignment, but go-around not required. Airspeed: +15/-10 KIAS.

3.3.6.3. U. Circling/side-step approach not performed in accordance with procedures outlined in the flight manual and directives. Erratic aircraft control. Large deviations in runway alignment requiring go-around.

3.4. Tactical Employment:

3.4.1. Area 41--Tactical Plan:

3.4.1.1. Q. Well-developed plan that included consideration of mission objectives, the threat, and capabilities of all flight members. Addressed contingencies in development of plan.

3.4.1.2. Q-. Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

3.4.1.3. U. Major errors in the plan precluded accomplishment of the stated objective.

3.4.2. Area 42--Tactical Execution:

3.4.2.1. Q. Applied tactics consistent with the threat, current directives, and good judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Threat reactions were timely and correct.

3.4.2.2. Q-. Applied tactics with only minor deviations, omissions, and/or errors which degraded the reliable release of weapons or mission effectiveness but did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness and timely threat reactions were poor.

3.4.2.3. U. Unable to accomplish the mission due to major errors or omissions during execution of the tactical plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

3.4.3. Area 43--GCI/AWACS/Composite Force (CF) Interface:

3.4.3.1. Q. Effectively planned for and used GCI/AWACS/CF to enhance mission and achieve objectives. No confusion between GCI/AWACS/CF and bombers.

3.4.3.2. Q-. Minor confusion between GCI/AWACS/CF and bombers. Less than optimum use of GCI/AWACS/CF, which did not affect the bombers offensive advantage.

3.4.3.3. U. Inadequate or incorrect use of GCI/AWACS/CF resulted in loss of offensive potential.

3.4.4. Area 44--Radio Transmission/Interphone-Usage and Discipline:

3.4.4.1. Q. Communications (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct maneuvers or describe the tactical situation.

3.4.4.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, mutual support or mission accomplishment. Extraneous comments over radios/interphone presented minor distractions.

3.4.4.3. U. Communications over radios/interphone were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness, or mission accomplishment.

3.4.5. Area 45--Ingress (Includes routing into the threat area):

3.4.5.1. Q. Aware of all known/simulated threats and defenses. Employed effective use of terrain masking and/or route and altitude selection.

3.4.5.2. Q-. Ignored some of the known/simulated threats and defenses. Improper use of terrain masking and/or route and altitude selection resulted in unnecessary exposure.

3.4.5.3. U. Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective terrain masking and/or route or altitude threat deconfliction.

3.4.6. Area 46--Low Altitude Navigation (Includes activity from the start descent point for the low altitude route through the route exit fix) (If applicable):

3.4.6.1. Q. Procedures and checklists required by the flight manual and governing directives were accomplished accurately and efficiently. Altitude deviations did not exceed +/-150 feet from published or briefed altitude. FLIP AP/1B route width was not exceeded. Made all low level enroute points and control times within briefed tolerances.

3.4.6.1.1. (N) Advised pilot of altitude deviations prior to exceeding +/-150 feet of published or briefed altitude.

3.4.6.2. Q-. Minor deviations, omissions and errors were noted. Altitude deviations exceeded +/-200 feet from published or briefed altitude.

3.4.6.2.1. (N) Advised the pilots of altitude deviations prior to exceeding +/-200 feet of from published or briefed altitude.

3.4.6.3. U. Not up to "Q-" standards. FLIP AP/1B route width was exceeded. Low level enroute points and control times were outside briefed tolerances.

3.4.7. Area 47--TA-Integrated EVS/Visual Procedures (If applicable):

3.4.7.1. Pilot:

3.4.7.1.1. Q. Properly interpreted scope. No obstacles displayed above the horizontal reference line, or horizontal reference line was not maintained above the trace except for dropout techniques, for longer than two consecutive scans (prior to initiating necessary corrective action during TA operations). TA trace, radar altimeter, timing, or EVS/visual integration procedures (as applicable) were properly followed. During integrated EVS/visual operations, all turns were visually monitored.

3.4.7.1.1.1. Radar altitude -150 to +200

3.4.7.1.1.2. Airspeed +/-15 KIAS (Non-mts); +/-20 KIAS (mts)

3.4.7.1.2. Q-. Properly interpreted scope. No obstacles displayed above the horizontal reference line, or horizontal reference line was not maintained above the trace except for dropout techniques, for longer than three consecutive scans (prior to initiating necessary corrective action during TA operations). TA trace, radar altimeter, timing, or EVS/visual integration procedures (as applicable) were properly followed. During integrated EVS/visual operations all turns were visually monitored. Some difficulty interpreting scope.

3.4.7.1.2.1. Radar altitude -200 to +250

3.4.7.1.2.2. Airspeed +/- 20KIAS (non-mts); +/- 25KIAS (mts)

3.4.7.1.3. U. Not up to "Q-" standards.

3.4.7.2. Navigator:

3.4.7.2.1. Q. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently. Used correct clearance plane setting for the route segment flown. Compensated the TA system accurately for safe, efficient TA operations, and determined the TA compensation value within .2 degrees. Updated and maintained the FRL setting within .3 degrees when FRL mode was used. Coordination with the pilots provided accurate terrain assessment along the flight path of the aircraft. Advised the pilots of altitude deviations of -150/+200 ft from the planned clearance plane altitude. Chose and communicated the most effective use of terrain for masking purposes within the route boundaries.

3.4.7.2.2. Q-. Compensated the TA system accurately for safe, efficient TA operations, and determined the TA compensation value within .3 degrees. Updated and maintained the FRL setting within .5 degrees when FRL was used. Advised the pilots of altitude deviations of -200/+250 feet from the planned clearance plane altitude

3.4.7.2.3. U. Not up to "Q-" standards.

3.4.8. Area 48--Weapons Employment:

3.4.8.1. Q. Weapon employment must be accomplished within specified release parameters for the type of weapon being released or mission directives. Accomplished procedures and checklists prescribed by the flight manual, weapon manual, and governing directives to prearm, prepare for release, arm, and release all weapons accurately and efficiently or resulted in a properly aligned missile that would have struck within published reliability standards for that missile. Properly configured weapons for release, and correctly analyzed malfunctions. TOTs were within published or briefed tolerances.

3.4.8.1.1. (N) Crosshair placement for gravity releases or for missiles requiring prelaunch updates was within the reliability criteria. The navigator noted and advised the RN of apparent crosshair placement errors and/or equipment configurations adversely impacting reliability.

3.4.8.1.1.1. For AGM-84 Evaluations. Did not penetrate the Radar Horizon "Stay Out Zone," if applicable. AGM-84 Target Data/Control did not exceed:

3.4.8.1.1.1.1. Final Mark Check 3 NM/3 DEG

3.4.8.1.1.1.2. Range and Final Relative Bearing 3 NM/3 DEG

3.4.8.1.1.1.3. True Airspeed +/-5 KTS

3.4.8.2. Q-. Only minor deviations, omissions, and/or errors in weapon employment, but all release parameters were met, safety was not compromised, and successful weapon employment objectives were not jeopardized.

3.4.8.2.1. (N) AGM-84 Target Data/Control did not exceed:

3.4.8.2.1.1. Final Mark Check 5 NM/5 DEG

3.4.8.2.1.2. Range and Final Relative Bearing 5 NM/5 DEG

3.4.8.2.1.3. True Airspeed +/-10 KTS

3.4.8.3. U. Not up to "Q-" standards. The overall grade for bombing will be unqualified when any of the following occur:

3.4.8.3.1. Failure to release a weapon.

3.4.8.3.2. Failure to release a weapon in the proper configuration.

3.4.8.3.3. Failure to recognize an obvious malfunction adversely affecting weapon employment capability.

3.4.8.3.4. Aborted, downgraded, or changed the planned weapon release without a valid reason.

3.4.8.3.5. Failure to achieve weapon minimum release and safe escape parameters for specific weapons planned, and track tolerances for conventional weapons.

3.4.8.3.6. Attempted or released weapons in contradiction with the mission directives/SPINS.

3.4.8.3.7. If, in the flight examiner's judgment, the operator could not successfully attack a target, the flight examiner may also give an unqualified grade in AIRMANSHIP.

3.4.9. Area 49--Range/ESS Procedures:

3.4.9.1. Q. Used proper procedures for entering and exiting the range/ESS. Range/ESS operations followed established procedures.

3.4.9.2. Q-. Minor deviations from established procedures for range/ESS entry, exit, or operations.

3.4.9.3. U. Major deviations from established procedures for range/ESS entry, exit, or operations.

3.4.10. Area 50--Egress (Includes routing from the threat area):

3.4.10.1. Q. Effectively used evasive maneuvers, terrain masking and/or altitude selection to complete an expeditious egress from the target area. Formation join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.4.10.2. Q-. Egress contributed to unnecessary exposure to threats and delayed formation join-up and departure from target area.

3.4.10.3. U. Egress caused excessive exposure to threats. Formation join-up was not accomplished or resulted in excessive exposure to threats.

3.4.11. Area 51--Training Rules/ROE:

3.4.11.1. Q. Adhered to and knowledgeable of all training rules/ROEs.

3.4.11.2. Q-. Minor deviations, omissions, and/or errors. Made timely and positive corrections. Did not jeopardize safety of flight.

3.4.11.3. U. Significant deviations indicating a lack of knowledge of training rules/ROEs.

3.4.12. Area 52--(E) Threat Identification:

3.4.12.1. Q. All direct threat/TAR signals were correctly identified in a timely manner. All indirect signals were identified as appropriate for the situation.

3.4.12.2. Q-. All threat signals were correctly identified with only minor delays that did not affect the mission. Indirect signal(s) were initially identified as a threat/TAR but corrected in a timely manner.

3.4.12.3. U. Unable to identify threat signals correctly without adverse delay. Identified an indirect threat as a direct threat/TAR.

3.4.13. Area 53--(E) Penetration Procedures (Takeoff through last weapon release):

3.4.13.1. Q. Initial equipment settings were accomplished IAW applicable mission materials and verified using the Equipment Set checklist. Receiver monitoring and procedures were accomplished IAW governing directives.

3.4.13.2. Q-. Procedures were accomplished with only minor deviations, omissions or errors demonstrating minimum acceptable knowledge/performance of the flight manual or governing directives.

3.4.13.3. U. Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge/performance of the flight manual or governing directives.

3.4.14. Area 54--(E) Expendable Procedures:

3.4.14.1. Q. Procedures were accomplished in a timely manner and, according to the flight manual and governing directives, with only minor deviations, omissions, and/or errors.

3.4.14.2. Q-. Procedures were accomplished according to the flight manual and governing directives, but with deviations, omissions, and/or errors demonstrating minimum acceptable knowledge of flight manual or governing directives.

3.4.14.3. U. Procedures were omitted or accomplished with deviations, omissions or errors demonstrating unacceptable knowledge of the flight manual or governing directives.

3.4.15. Area 55--(E) Threat Counter-Measures. This area is used to grade countermeasures against direct threat radars/TARs (Fighter, SAM, AAA and naval Threats).

3.4.15.1. Q. Countermeasures were correctly applied in a timely manner in accordance with governing directives.

3.4.15.2. Q-. Countermeasures were applied in a timely manner with only minor deviations, omissions, and/or errors demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.15.3. U. Countermeasures were either late or inappropriate for the threat encountered demonstrating unacceptable knowledge and indicating a definite need for additional training. Did not give threat or maneuver calls or calls were unreadable. Failed to counter a direct threat.

3.4.16. Area 56--(E) Acquisition/Communication Countermeasures. This area consists of all actions taken against indirect threat radars and communications facilities.

3.4.16.1. Q. Countermeasures against acquisition/ communication facilities were in accordance with the flight manual and governing directives. ECM was timely and correctly applied.

3.4.16.2. Q-. Required actions were accomplished, but with only minor deviations, omissions, and/or errors demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.16.3. U. Acquisition/communications countermeasures were not correctly employed.

3.4.17. Area 57--(E) Withdrawal Procedures. This phase includes all actions (except in response to a direct threat) after the last weapon release until the TCM.

3.4.17.1. Q. All procedures required by the flight manual and governing directives were accomplished.

3.4.17.2. Q-. Required actions during the withdrawal phase were incomplete or were accomplished with only minor deviations, omissions, and/or errors demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.17.3. U. Required actions during the withdrawal were not accomplished or demonstrated an unacceptable knowledge of procedures.

ROBERT H. FOGLESONG, Lt General, USAF
DCS, Air and Space Operations

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*
AFI 11-290, *Cockpit/Crew Resource Management*
AFI 11-415, *Weapons and Tactics Program*
AFI 33-360V1, *Publications Management Program*
AFMAN 37-139, *Records Disposition Schedule*
AFPD 11-2, *Aircraft Rules and Procedures*
AFPD 11-4, *Aviation Service*

Abbreviations and Acronyms

AAA—Anti Aircraft Artillery
ACC—Air Combat Command
AFI—Air Force Instruction
AFORMS—Air Force Operations Resource Management System
AFRC—Air Force Reserve Command
AGM—Air to Ground Missile
ANG—Air National Guard
ASR—Airport Surveillance Radar
ATD—Aircrew Training Device
AWACS—Airborne Warning and Control System
CC—Commander
CF—Composite Force
CP—Co-Pilot
CRM—Cockpit/Crew Resource Management
DEG—Degree
DH—Decision Height
DOTV—Director of Operations Training Standardization Evaluation
EA—Electronic Attack
ECM—Electronic Counter Measure
ESS—Electronic Scoring Site

EP—Emergency Procedures

EPE—Emergency Procedures Evaluation

EVS—Electro-Optical Viewing System

EW—Electronic Warfare Officer

FCIF—Flight Crew Information File

FRL—Fuselage Reference Line

FTU—Formal Training Unit

GCI—Ground Control Intercept

HHQ—Higher Headquarters

HQ—Headquarters

IAW—In Accordance With

| **IEW**—Instructor Electronic Warfare

IFF—Identification Friend or Foe

ILS—Instrument Landing System

IP—Instructor Pilot

IRC—Instrument Refresher Course

KIAS—Knots Indicated Airspeed

MAJCOM—Major Command

MDA—Minimum Descent Altitude

| **MPC**—Mission Planning Cell

MOA—Military Operating Area

MSN—Mission

MTS—Mountainous

MUTES—Multiple Threat Emissions Systems

N—Navigator

N/A—Not Applicable

NAF—Numbered Air Force

N/N—No-Notice

OG—Operations Group

OGV—Operations Group Standardization/Evaluation

OPR—Office of Primary Responsibility

P—Pilot

PAR—Precision Approach Radar

QUAL—Qualification

Q—Qualified

R—Required

| **RAP**—Ready Aircrew Program

RN—Radar Navigator-Bombardier

ROE—Rules of Engagement

SAM—Surface to Air Missile

SIF—Selective Identification Feature

SIM—Simulator

SPINS—Special Instructions

SQ—Squadron

STAN/EVAL—Standardization/Evaluation

TA—Terrain Avoidance

TAR—Target Acquisition Radar

TCM—Terminate Counter Measures

U—Unqualified

VDP—Visual Descent Point

VFR—Visual Flight Rule

VOR—VHF Omnidirectional Range

WRM—War Reserve Munitions

WST—Weapons System Trainer

Terms

Cockpit/Crew Resource Management (CRM)—The effective use of all available resources—people, weapon systems, facilities, equipment, environment—by individuals or crews to safely and efficiently accomplish an assigned mission or task.

Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information.

Major—Detracted from mission accomplishment. Adversely affected use of equipment, or violated safety.

Minor—Did not detract from mission accomplishment.

| Omission—To leave out a required action or annotation.